

Caspian Stereo Integrated Amplifier

Set Up Guide and Product Manual



Roksan is a member of



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INTRODUCTION

Thank you for your purchase of the Roksan Caspian Stereo Integrated Amplifier.

This amplifier is designed and manufactured to the highest specification and rigorously tested to offer you many years of trouble-free pleasure.

Your Caspian Stereo Integrated Amplifier is at the heart of your hi-fi system. Its correct installation, set-up and operation will have a profound influence on the sonic performance of the entire hi-fi installation.

Please read the contents of this manual thoroughly. It will help you to understand your hi-fi equipment better and enhance your listening pleasure. Please keep this manual for future reference.

UNPACKING

Included in the packing of your Caspian Stereo Integrated Amplifier you will find:

- One mains lead fitted with the correct mains power plug for your country
- One Roksan CR7 Remote Control handset and CR2032 battery
- One information pack.

After removing these items please retain all packing materials. Correct packing is necessary for possible future transportation of your amplifier.

EU DIRECTIVES



Roksan declares that the apparatus "Caspian Stereo Integrated Amplifier" complies with the essential requirements and other relevant provisions of Directive 1999/5/EC".



NOTE: This product must be earthed. Please ensure that other equipment connected to it is earthed according to the manufacturer's instructions.

AC MAINS SUPPLY

Your Caspian Stereo Integrated Amplifier is set to operate from a fixed supply voltage which is marked on a label next to the mains input socket. Before connecting the mains lead please check that your mains supply corresponds to this label as below:

230 V Products _____ Voltage Range : 220 - 240 V

115 V Products _____ Voltage Range: 100 - 120 V

100 V Products _____ Voltage Range: 90 - 110 V

The mains lead supplied with this product has an IEC C13 mains plug which is inserted into the Mains Input Socket on the unit's rear panel. The other end is a moulded plug appropriate to that for your country. In the UK this is the standard UK13A plug.



NOTE: Other international markets will require a different value plug and protection fuses. Please contact us for more details.

This plug should ordinarily not be removed from the lead. If you do remove it, please dispose of it safely so that it cannot be plugged into a mains socket whilst in a potentially dangerous condition. If your lead has been damaged please obtain a complete replacement lead from your dealer.

Should you move to another area where either the mains voltage or the mains plugs are different from those as supplied with your amplifier, please contact the appointed Roksan distributor for assistance.



Please observe correct mains polarity at all times.

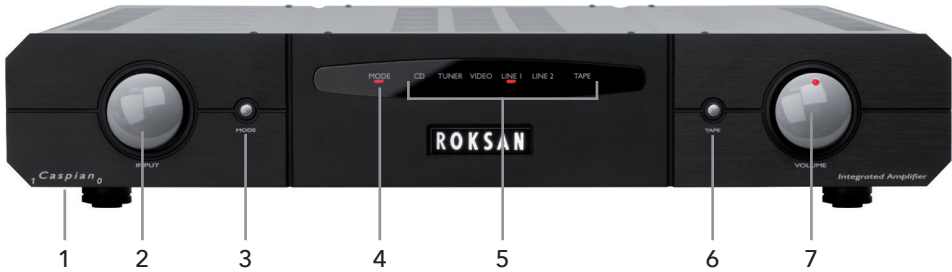
The amplifier mains fuses are located on the rear panel below the IEC Mains Input Socket. These must only be replaced by the fuse type and rating as described on the fuse rating label on the rear panel of the unit.

If the equipment is likely to be unused for some time, unplug it from the mains supply.

MAINTENANCE

After disconnecting the amplifier from the mains supply, the casing and front panel may be cleaned with a lightly dampened lint-free cloth. Avoid using abrasive substances or solvents.

FRONT PANEL VIEW



- | | |
|--------------------------|------------------------|
| 1. AC Mains Power Switch | 5. Input Indicators |
| 2. Input Selector | 6. Tape Monitor Button |
| 3. Mode Button | 7. Volume Control |
| 4. Mode Indicator | |

REAR PANEL VIEW



- | | |
|---|---------------------------------|
| 1. Balanced XLR CD Input | 6. Chassis Ground Terminal |
| 2. CD Input Selector | 7. Serial Number |
| 3. RCA Inputs | 8. Loudspeaker Output Terminals |
| 4. RCA Outputs - 1 x Tape
2 x Pre-Amplifier | 9. Voltage & Fuse Rating Label |
| 5. Power Amplifier Input (requires
internal work for activation) | 10. AC Mains Fuse Holder |
| | 11. AC Mains Input Socket |

CR7 REMOTE CONTROL



The CR7 Remote Control is used for both the Caspian Stereo Integrated Amplifier and CD Player. The top section is dedicated to the Integrated Amplifier and the lower section to the CD Player.

Integrated Amplifier Functions

MODE: No function - For legacy products only

MUTE: Reduces the volume by -20dB

INPUT ◀ : Scroll through inputs to the left

INPUT ▶ : Scroll through inputs to the right

VOLUME ▼ : Adjusts the volume down

VOLUME ▲ : Adjusts the volume up

CD Player Functions

CD ◻ : Stop

CD ▶|| : Play/Pause

TRACK ◀ : Skip to previous track

TRACK ▶ : Skip to next track

FAST ◀◀ : Rewind

FAST ▶▶ : Forward

REPEAT: Press once to repeat all tracks
Press again to repeat current track
Press again to cancel repeat mode

SHUFFLE: When in Stop mode, press Shuffle to play the tracks in a random order. To cancel press Stop ◻



CAUTION: Danger of explosion if remote control battery is incorrectly replaced. Replace only with the same or equivalent type.



WARNING: Do not ingest the battery, Chemical Burn Hazard.

This remote control contains a coin/button cell battery. If the coin/button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.

Keep new and used batteries away from children.

If the battery compartment does not close securely, stop using the product and keep it away from children.

If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

LOCATION

Your amplifier should be located in a well ventilated area and kept away from sources of heat, dust, humidity and direct sunlight.

The amplifier may be positioned either as a free standing unit or alongside other audio/video product(s). Never place the amplifier on other electronic equipment, carpet or any surface likely to hinder normal ventilation. Never allow liquids or other objects to fall into the unit.



NOTE: The feet on the Caspian products are made from natural rubber for improved sound quality. Unfortunately, they can sometimes react with oiled, natural wood surfaces. It is recommended to place a non porous material between the feet and the wooden surface to prevent the reaction and preserve the finish of the wood.



NOTE: This unit contains no user serviceable parts. Do not remove any panels or attempt to service it yourself. **Unauthorised servicing will void the warranty.**

CONNECTING MAINS POWER



NOTE: The amplifier uses high current circuitry. Do not unplug the cable while the amplifier is on.

The moulded IEC plug of the supplied mains lead should be plugged into the socket on the rear of the unit first and then plugged into the mains supply. The Mains Power Switch is on the left front underside of the amplifier. This switch can be left on; if however the amplifier is likely to be unattended for a long period, switch it off and unplug the mains lead from the wall.

SIGNAL CONNECTIONS

All the inputs and outputs use gold plated RCA Phono connectors (CD input also has switchable gold plated Balanced XLR inputs) and should be connected accordingly:

Left Channel - Black; Right Channel - Red

RCA Input Connections

There are six inputs including the Tape Input. All these inputs are line level inputs and will accept virtually all currently available source components.

Phono RCA Input Connections

As your amplifier is a line level unit you cannot connect a phono cartridge directly to it, you will need a dedicated phono pre-amplifier. The Roksan range of phono pre-amplifiers accept conventional moving coil and moving magnet cartridges and have custom equalisation for the Roksan Shiraz cartridge. Further information can be found at roksan.com

RCA Output Connections

There are two pre-amplifier outputs and one tape output. Connect the pre-amplifier outputs to a subwoofer or power amplifier. The Tape Output should be connected to the inputs on a tape deck.

LOUDSPEAKER CABLE CONNECTIONS

Loudspeakers and their cables can be connected to the amplifier in a number of ways. The following sections guide you through the different options available to you depending on your electronics, cable and personal choice/ preference.

The right and left loudspeakers are connected to the amplifier via the binding posts. The amplifier offers the standard 4mm banana plugs or bare wire connections.



Litz-wound loudspeaker cables or those with a complex plaited construction can present a highly capacitive load to an amplifier and may cause damage to the amplifier and/ or degrade the sound of your system. Choose a cable of simple construction, manufactured from high-quality materials. Your ROKSAN retailer will be able to advise.



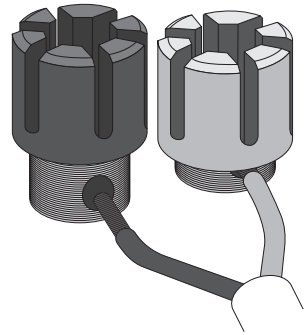
NOTE: DO NOT use speaker cable with conductor size less than 16 AWG (1.6 mm diameter) or greater than 12 AWG (2.05 mm diameter).



NOTE: We strongly recommend that you use professionally terminated speaker cables using 4mm plugs. Any attempt to connect cables which are not terminated may result in damage to the amplifier if not done correctly.

Making a connection using bare wire must be done correctly so that there are no stray strands of wire to touch the opposite terminal. Carefully strip the insulation on each wire exposing about 12mm (1/2") of the conductors. If the conductor is stranded, twist the strands together on each conductor.

Unscrew the binding post and feed it through the cross-hole and tighten the binding post securely making sure that there are no loose strands or bare ends protruding through the post.



Speaker Connection Polarity

Carefully observe polarity ensuring that the red (+) speaker terminal/ cable is connected to the red (+) amplifier terminal and the black (-) speaker terminal/ cable to the black (-) amplifier terminal.

When both left and right loudspeaker outputs are connected to their respective loudspeakers the amplifier is ready for use.

CONNECTING TO LOUDSPEAKERS

There are 3 ways to connect your loudspeakers to the amplifier(s). They are single wire, bi-wire and bi-amp.

What is Single Wiring?

Single wiring is the quickest and simplest way to connect the loudspeakers. In some cases, it can yield better results than bi-wiring. This uses a single pair of loudspeaker cables to connect the amplifier to the loudspeakers sending the full range signal to the speakers along the cable.

What is Bi-Wiring and Bi-Amping?

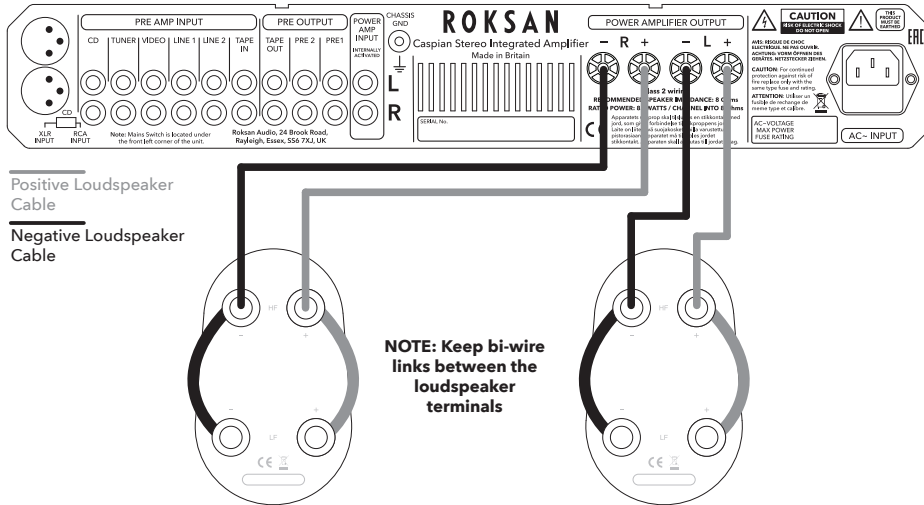
A loudspeaker's crossover varies the impedance seen by the amplifier as well as directing the frequencies to the corresponding drivers within the loudspeaker. When a full range audio signal is applied to the terminals of a full range loudspeaker system, the bass driver(s) will only receive low frequency signals, the mid driver receives the mid band frequency signals and the tweeter only gets sent high frequency signals. This means that if separate speaker cables are connected to the low and high frequency terminals, not only have the drive units had the frequency's directed and divided for them, but if using a bi-wire setup the two separate speaker cables will now also carry different signals due to the impedance.

The effects of bi-wiring can be subtle depending on the cable construction and design. It could be better to go for one better engineered cable than two for bi-wiring. We recommend experimenting with both configurations to find out which one works best in your system.

Bi-amping adds an additional amplifier (eg. Caspian Power Amplifier) to the system so that the one amplifier drives the low frequencies - normally the power amplifier - and the other amplifier drives the high frequencies. Bi-amping can therefore present a 'cleaner' signal at both the low frequency and high frequency speaker terminals, and because the high and low frequencies have already been separated, each has a minimal effect on the other - in essence the bass has less effect on the delicate treble. In order to best take advantage of bi-amping the amplifiers should be as independent from each other as possible. For instance, if using two stereo amplifiers you should use one stereo amplifier for the bass and the other for the treble, minimising the impact of the bass on the treble.

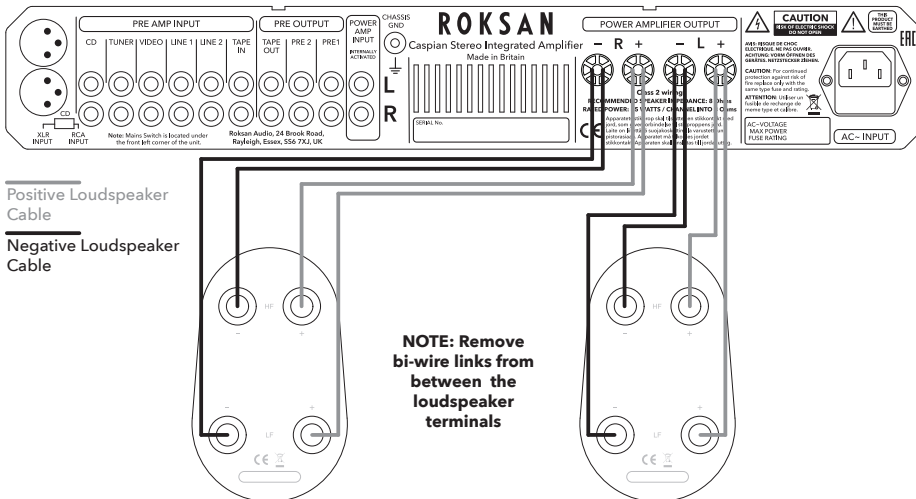
Single Wiring The Loudspeakers

When single wiring, connect the loudspeaker cables as illustrated below.



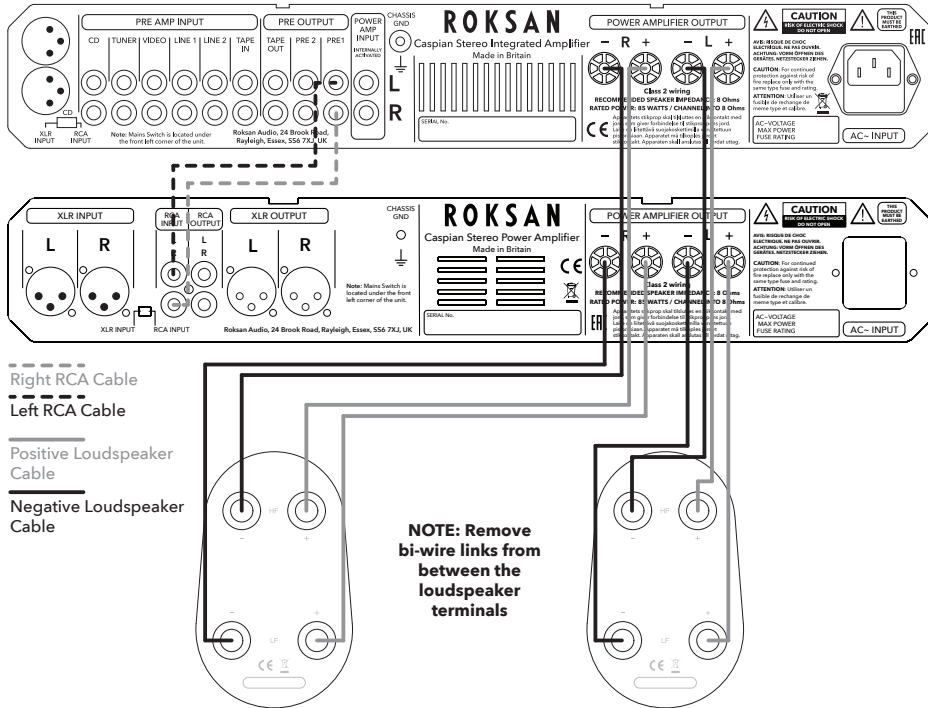
Bi-Wiring The Loudspeakers

Bi-wiring is achieved by using a single amplifier, but splitting the high and low frequency loudspeaker cables at the amplifier. It uses the same principles as bi-amping, but the two sets of cables that feed the high and low frequency terminals on the loudspeaker connect to the single set of terminals on the amplifier. Connect the cables as illustrated below.



Bi-Amping The Loudspeakers

Bi-amping is similar to bi-wiring, but uses an additional amplifier (Caspian Power Amplifier) to drive the low frequency terminals. One set of cables goes from the Caspian Integrated Amplifier to the high frequency terminals on the loudspeaker and the power amplifier drives the low frequency terminals. Connect the cables as illustrated below.



SWITCHING ON

The power switch is on the left front underside of the amplifier. This switch is the only method of controlling the power to the amplifier.

When switched to 'on' the amplifier runs a self-diagnosis. This is a quick process where the Mode LED indicator will momentarily be green. When completed, the LED will turn red and the amplifier is now ready for use.

USING THE FRONT PANEL CONTROLS

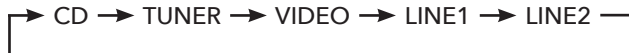
The Mode Button

The Mode button on the front panel of the amplifier has the following functions:

- Pressing the Mode button once with the amplifier activated will attenuate the volume level by 20 dB and the indicator LED will glow orange. The amplifier remains fully functional in this mode.
- A second press returns the amplifier to the unattenuated level and the indicator LED will revert to red.

Input Selector

The Input Selector is an endless rotary switch that moves round one click at a time. It connects each signal source to the amplifier by rotating through the inputs with the exception of Tape. Rotating the Selector continuously clockwise will select inputs in this sequence:



Whenever an input is selected the appropriate indicator LED illuminates red.

When you select an input source, that input is connected to the Tape Output of the amplifier thus enabling you to record.

In multi-room installations or where the front display is not seen, direct input access for CD, Tuner, Video, Line1 & Line2 can be achieved by programming direct access codes (For assistance contact Roksan).

Volume Control

The Volume Control is a precision device. It follows a logarithmic law so that its response approximates that of the human ear. There is an illuminated indicator on the Volume Control to clearly show the appropriate volume setting. The level increases in a clockwise direction.

Tape Button

Pressing the Tape Button connects the output of your tape deck to the amplifier, overriding the previously selected input. However, the selected input is left connected to the recording input of your tape deck. The Tape indicator LED will illuminate red and the selected source indicator remains illuminated as well.

The input selector remains functional when the Tape Monitor is 'on', allowing a range of sources to be recorded.

Pressing the Tape Button, toggles the Tape Monitor 'on' and 'off'.

PLAYING MUSIC FOR THE FIRST TIME

When first turning the amplifier on, it is important to follow these simple steps in order to protect it and your loudspeakers.

1. Reduce the volume of the amplifier to minimum
2. Start playing from your chosen source (CD, DAC, Turntable, etc) and increase the volume slowly
3. If connected to the Caspian Stereo Power Amplifier, the LED indicators on the power amplifier will automatically switch to red and will be activated within a few seconds.

RUNNING IN THE NEW AMPLIFIER

Any new electrical equipment requires a "running-in" period, warming up the components to the optimum working temperatures, acquiring the electromagnetic properties and stability that offers the listeners optimal musical performance. We suggest that after the initial playing period the amplifiers should be left playing at low volumes for up to 40 hours. Clear improvements to clarity and speed will be apparent after the first 10-15 hours of playing with the amplifier reaching its optimal performance after 40 hours.



NOTE: When switched off for long durations the procedure described above may need to be performed again.

KNOW YOUR CASPIAN

If the amplifier heat-sink temperature rises above 55°C the internal fan will activate to keep heat-sink temperature constant. If the output level is reduced the fan will continue for approximately 45 seconds and will switch off once the temperature has lowered.

If for any reason the amplifier overheats through overload or lack of ventilation, it will revert to shut-down mode for protection.

Reset the amplifier by switching the mains switch off and on.

If the output is accidentally shorted the amplifier will revert to shut-down. You can manually re-activate amplifier after the short/fault has been eradicated.

In the unlikely event of an internal fault such as a power supply failure, the Mode Indicator LED will glow green and the amplifier will shut down. If the fault persists, the amplifier will stay in shut-down/ in protection mode and you should consult your Roksan dealer.

WARRANTY

There are no user-serviceable parts inside your Caspian Stereo Integrated Amplifier. If a fault should develop, refer any servicing to your appointed Roksan dealer, distributor or Roksan approved service agent.

Both the craftsmanship and the performance of this product are covered by the manufacturer's warranty against manufacturing defects provided that the product was supplied by an authorised Roksan retailer under the consumer sale agreement. For the period of cover please refer to the product page on our website: roksan.com for the product you have purchased.

When purchasing Roksan products, please keep your receipt of purchase safe, as this validates your warranty.



This warranty excludes:

1. Damage caused due to accident, misuse, neglect and incorrect installation, adjustment or repair.
2. Liability for damage or loss during transit from the retailer or purchaser to Roksan or its authorised distributor for the purposes of repair or inspection.
3. Carriage costs to Roksan that will be borne by the consignor.

All claims under this warranty must be made through an authorised Roksan retailer.

If equipment returned for repair to Roksan is found on inspection to not comply with the product specification, Roksan reserves the right to make a charge for examination and return carriage.



NOTE: Unauthorised servicing will void this warranty.

TROUBLESHOOTING

If you suspect that your amplifier is not operating properly, you should check all the connections carefully. Pay particular attention to loudspeaker phasing and channel connections. RCA plugs should be fully inserted - a frequent cause of problems is that RCA plug surrounds do not make proper contact. Below are some commonly encountered problems with suggestions for possible cure. The list is not exhaustive: If you have any unresolved problems, please consult your appointed Roksan dealer or distributor.

SYMPTOM	LIKELY CAUSE	SUGGESTED REMEDY
<ul style="list-style-type: none"> No power. 	<ul style="list-style-type: none"> AC Mains lead not inserted properly Unit not switched on. 	<ul style="list-style-type: none"> Ensure AC mains lead is fully inserted Switch unit on at front left underside.
<ul style="list-style-type: none"> No output on one or both channels. 	<ul style="list-style-type: none"> Amplifier in protection mode (Mode LED green) Missing or bad input signal connection Incorrect loudspeaker connection Wrong input selected Tape Monitor selected Over heating Amplifier or pre-amplifier are in the mute position. 	<ul style="list-style-type: none"> Check all input connections Check loudspeaker output connections on rear panel Select correct input, ascertain source is working Deselect Tape Monitor on your integrated or pre-amplifier Allow amplifier to cool, increase ventilation or use at lower volume Deselect Mute (check volume setting first) Switch to RCA or XLR CD input as appropriate.
<ul style="list-style-type: none"> Very low sound output. Poor loudspeaker imaging, lack of bass output. 	<ul style="list-style-type: none"> Loudspeakers connected out of phase. 	<ul style="list-style-type: none"> Check polarity of loudspeaker connections (especially important if bi-wiring, bi-amping).
<ul style="list-style-type: none"> Hum from loudspeakers. 	<ul style="list-style-type: none"> Incorrect grounding. 	<ul style="list-style-type: none"> Check mains polarity and grounding on all connected equipment.

SPECIFICATIONS

INPUTS

5 Line & Tape gold plated RCA - CD Input also switchable to balanced gold plated XLR

Input Impedance: 47 k Ω

Input Sensitivity (85 W): Line 240 mV

OUTPUTS

Gold plated RCA, Tape & 2 Pre-Amplifier

Output Voltage: 240 mV (Tape Out)
700 mV (Pre-Amplifier Out)

Power Outputs: Loudspeaker, L & R 4mm binding posts

Output Power: 85 Watts, into 8 Ω both channels driven

Output Current: 60 Amps Peak to Peak

Damping Factor: 160 measured at 8 Ω

Frequency Response: -3 dB, <1 Hz - 90 kHz

Gain: 40 dB Overall (Pre & Power)
9.3 dB Pre-amplifier
30.7 dB Power amplifier

Harmonic Distortion: 0.002% 1 kHz, 0.015% 20 kHz 10 W - 8 Ω
0.0025% 1 kHz, 0.03% 20 kHz 50 W - 8 Ω

Signal to Noise Ratio: Line 108 dBa (ref. 500 mV)
85 dBa (ref. 1 W, 8 Ω)

POWER SUPPLY

Power Supply: 350 VA Ultra low noise toroidal transformer
60 VA Ultra low noise toroidal transformer preamplifier section
5 Regulated supply rails

Power Source: 100 - 120 V, 50 / 60 Hz
220 - 240 V, 50 / 60 Hz (via Mains inlet filter)

Maximum Power Consumption: 570 W (8 Ω)

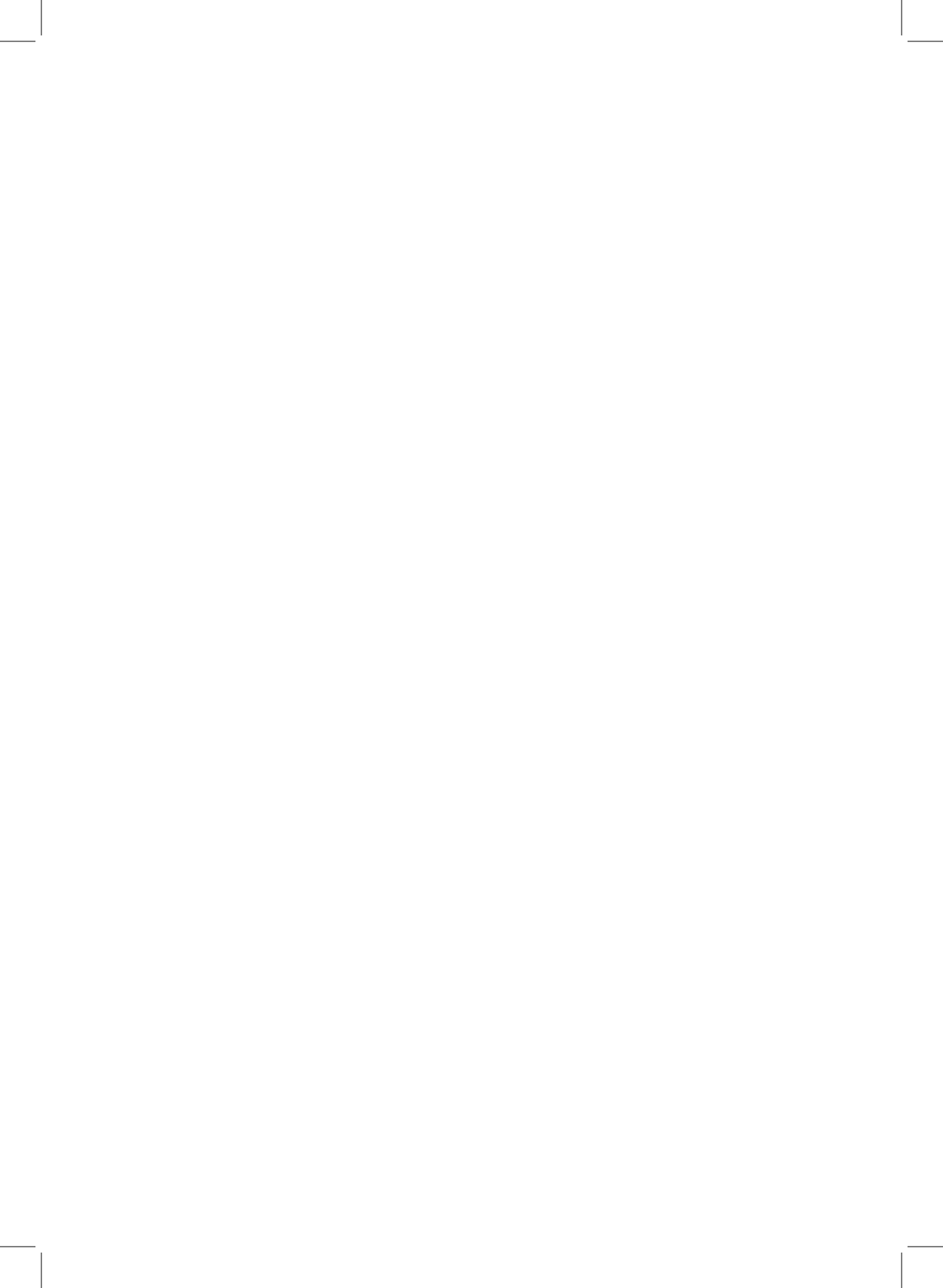
Dimensions (W x D x H): 432 x 330 x 70 mm
432 x 330 x 80 mm (including feet)

Weight: 13 Kg

All specifications are liable to change without notice. E&OE







ROKSAN

MADE IN
BRITAIN



**Designed and built
in Great Britain.**

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